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Electrification

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November 8, 2018

The Honorable Jocelyn Boyd, Chief Clerk

South Carolina Public Service Commission

101 Executive Center Drive, Suite 100

Columbia, S.C. 29210

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**Re: Dockets 2018-321-E and 2018-322-E**

Dear Ms. Boyd:

On behalf of the Alliance for Transportation Electrification, we ask that you file this letter in the above Dockets which support the filings of DE Progress and DE Carolinas to advance the deployment of electric vehicle (EV) infrastructure in the state. The Alliance is a non-profit coalition established for companies in the EV ecosystem about one year ago whose goal is to accelerate the deployment of EV infrastructure, promote a strong and robust utility role in transportation electrification, and advance interoperability and open standards. We consist of about 40 firms and organizations around the country, and are active in NARUC, SEARUC regulatory meetings, as well as over 20 state Commissions and state agencies.

Duke has proposed a series of innovative and well-designed pilot programs that will test the deployment of utility sponsored infrastructure to electrify transportation in four key areas: residential charging; school buses; metro transit buses; and DC fast charging stations on highway corridors. The investment is modest, about \$10.4 million in total (capital and O&M) but is a good start to begin addressing the large infrastructure gap in South Carolina, and other southeastern states in the region, between the expected introduction of lower-priced EV's and the lack of adequate infrastructure.

For residential charging, Duke is offering a modest rebate for the deployment of Level 2 home charging (where one expects over 80 percent of the charging to take place) for up to 400 residential customers. In exchange, the customers will be obligated to share the charging data for this EVSE (EV supply equipment) and load management by the utility during defined hours. If managed properly with smart charging techniques and potential time-varying rates (namely, moving the charging loads away from peak to off-peak hours), we believe that both the customer will benefit with lower rates over time, and the utility will benefit from more efficient utilization of the distribution grid.

For school bus and metro transit electrification, Duke is proposing for school districts an up to \$125,000 rebate on a first-come, first served basis in order to lower the upfront capital cost of the electric bus cost, and to allow the utility to manage the associated charging infrastructure with vehicle-to-grid (VTG) capabilities. We believe this is an exciting opportunity for school districts around the state to step forward for the purchase of electric buses and demonstrate their commitment to lowered diesel emissions, as well as educating the students who ride in them about the benefits of electrification. Moreover, this program should be able to leverage the one-time funding from the Settlement Trust



created by Volkswagen in which SCDI has proposed using up to 15 percent of these funds for the replacement of diesel school buses with electric or propane propulsion.

For metro transit buses, again Duke is offering an upfront rebate of up to \$55,000 to transit agencies to help lower the upfront costs of such buses, and funding for up to twenty (20) electric transit bus charging stations. These can be potentially be large loads to manage, depending on the cycle runs of the buses and the type of charging, but in return for the rebate, Duke will have access to all charging data by time and location, and potentially be able to carry out some testing of utility-managed charging within the safe operating procedures of the transit agency. The company estimates annual cost savings of approximately \$1 million for the South Carolina transit agencies who participate in this program, with up to 20 buses being deployed.

For DC fast charging stations, there is no doubt from consumer surveys around the country that "range anxiety" is one of the biggest obstacles to a potential buyer of an electric vehicle. Accordingly, it is vital that building out DC fast charging stations (starting at 50 kw) in key locations around the state is vital to the overall success of greater EV adoption. Utilities such as Duke are ideal entities to plan and carry out such infrastructure since the utilization rates tends to be low in the early years of adoption but will strongly increase as more EV's enter the fleet. As it has designed this program, Duke is able to include DC fast charging stations in an overall portfolio of infrastructure, and their costs and benefits should be considered on an overall portfolio basis. Duke can afford to take the long-term view when deploying such infrastructure, which is more expensive due to its higher power flow capabilities, voltage, and overall electrical requirements. We believe that the 30 DC fast charging stations constitute a good start for South Carolina, but as EV penetration rates increase over time, more will be needed. But these early stations will give Duke the necessary experience and lessons learned that will prove invaluable as DC fast charging stations scale up in the future.

In conclusion, we believe these are well designed programs that should meet the public interest test in your judgment. They will allow Duke to test various approaches in this historic transformation of both the automotive, bus, and electric power industries in our country. Valuable lessons will be learned during the process, and the Commission should be flexible and dynamic in its response to these changes. In fact, we encourage the Commission to establish some type of generic docket or workshop type process in which the utilities, state agencies, local governments, school districts and transit agencies, and other EV stakeholders can gather together and discuss these important issues in a more collaborative way in the future. If you have any questions or concerns, I am available to respond at: [phil@evtransportationalliance.org](mailto:phil@evtransportationalliance.org). We can provide additional studies and information to the Commission either in these Dockets or in any other proceeding the Commission wishes to establish.

Sincerely,



Philip B. Jones, Executive Director

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